

**TESTIMONY OF MICHEHL R. GENT ON BEHALF OF
THE NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL
BEFORE THE SUBCOMMITTEE ON ENERGY AND RESOURCES
COMMITTEE ON GOVERNMENT REFORM
U. S. HOUSE OF REPRESENTATIVES
JUNE 8, 2005**

Good afternoon, Mr. Chairman and members of the subcommittee. My name is Michehl Gent and I am President and Chief Executive Officer of the North American Electric Reliability Council (NERC). As we approach the second anniversary of the largest blackout in North American history, I want to thank you for this opportunity to discuss the status of the electricity industry, particularly as it relates to the reliability of the bulk electric system.

Since the blackout on August 14, 2003, NERC, working with its ten regional reliability councils and all sectors of the electricity industry, has accomplished much to strengthen the reliability of the bulk electric system in North America. Yet more needs to be done if the United States and its trading partners to the north and south, Canada and Mexico, are to continue to have the assured delivery of the electricity on which so much of our economy and our social order vitally depends.

NERC is a nonprofit corporation formed after the 1965 Northeast blackout to promote the reliability of the bulk electric system that serves North America. NERC's mission is to ensure that the bulk electric system in North America is reliable, adequate, and secure. NERC works with all segments of the electricity industry as well as electricity consumers and regulators to set and encourage compliance with rules for the planning and operation of reliable electric systems. NERC comprises ten regional reliability councils that account for virtually all the electricity supplied in the United States, Canada, and a portion of Baja California Norte, Mexico. NERC also coordinates electricity industry activities to promote critical infrastructure protection of the bulk electric system in North America. NERC works with the Department of Homeland Security, the Department of Energy, and the Federal Energy Regulatory Commission on security matters and serves as the U.S. government's designated sector coordinator for the electricity sector, including operating the Electricity Sector Information Sharing and Analysis Center (ES-ISAC).

People normally take the reliability of the bulk electric system for granted, and that is understandable, because the system works very well, day in and day out, year in and year out, to the point where North Americans have the most reliable electric system in the world. On rare occasions the system fails in dramatic fashion, with enormous consequences, as happened on August 14, 2003. The U.S. Department of Energy has estimated that the cost of the August 14 blackout ranged between 4 and 10 billion dollars.

The blackout of August 14, 2003 should not have happened, and we must take all reasonable steps to forestall a recurrence. But the electric system is a very large, complex machine designed, assembled, and operated by humans. Machines sometimes break; humans sometimes make mistakes. So the industry must have in place the processes and mechanisms to arrest the spread of a local outage, should one begin. We must also develop the processes and mechanisms to allow rapid recovery from an outage. In the wake of the blackout, NERC and industry participants have redoubled their efforts to ensure the reliability of the bulk electric system in North America.

Reliability and the Changing Electricity Industry

The electricity industry has undergone profound change in the past decade, as competition is taking the place of regulation for major parts of the industry. Those changes have had significant consequences for how the industry maintains reliability on the bulk electric system that serves North America. It is not that the introduction of competition is wrong from a reliability standpoint. Rather, the introduction of competition means that NERC and the entire industry must adjust how they deal with reliability matters. What is wrong is to assume that the old ways of handling reliability will continue to work effectively in a restructured electricity industry.

In the first three decades of NERC's existence, the industry was characterized by vertically integrated utilities (both investor-owned and publicly owned), with each owning its own generation plants, transmission lines, and distribution systems to serve a defined group of customers that essentially "belonged" to each utility. Utilities sold electricity to one another, but it was mostly neighbors trading with neighbors, at first just in emergency situations, and then increasingly for economic reasons. As competitive wholesale electricity

markets developed, trade in electricity spanned longer distances, with organizations moving large blocks of power from one region to another. However, the electric transmission system was not designed and built to move large amounts of power from one region to another.

Along with increased competition in the supply of electricity came corporate restructuring. Some organizations sold off generation assets as part of their move to competitive wholesale markets. Others turned operation of their transmission systems over to independent system operators or regional transmission organizations. Some became transmission-only organizations. Independent power producers became the primary developers of new generating plants. Services were “unbundled,” and in many parts of the country the link between generation plant and ultimate customer was broken. Several generating plants under separate ownership might now sell their output to an unaffiliated marketer, who would arrange for an unaffiliated transmission company to transmit the power to an unaffiliated distribution company for delivery to the ultimate customer. With that degree of unbundling and restructuring, the near-constant coordination and communication that formerly took place within the traditional vertically integrated utility became, at the same time, much more difficult and much more important.

The Bulk Power Transmission System Is Becoming More Congested

An important indicator of the status of the bulk electric system is the amount of congestion occurring on the system. Each year in the last decade more transmission lines have been experiencing congestion for more hours of the year. Construction of additional transmission capacity has not kept pace with either the expansion in generating capacity or the expansion in demand. In the first three decades of NERC’s existence, significant transmission additions were included as an adjunct to the construction by utilities of large, central station generating plants. One of the consequences of the move to smaller generating units, largely constructed by non-utilities, is that the focal point for making major additions to transmission capacity was lost. With ownership of generation and transmission assets divided, decision-making is also divided. We’ve lost the centralized planning of both generation and transmission that formerly took place. Regional transmission organizations

may be able to provide this planning function, but not all are doing so, and RTOs don't exist in all parts of the country.

Other factors also contribute to the lack of transmission expansion. Difficulty in siting is a major factor. Another contributor is the considerable uncertainty over how a company that adds transmission capacity to the system will be able to recover its investment, and what return it will earn on that investment. Added together, these several factors mean we are not getting the transmission built that we need to support the amount of regional trade associated with competitive wholesale markets.

Industry restructuring is also proceeding at different paces in different places. The physical electric system hasn't changed, but the ownership and control over facilities has changed, as have the business models being employed by the increasing number of industry participants. But things are not uniformly different. In some parts of the country we have regional transmission operators or independent system operators; transmission owners may or may not also own generation; in other parts of the country we continue to see a predominance of vertically integrated utilities. In some places the new models and the old model exist side by side.

Because all these different entities are still interconnected to one physical system, they all need to operate to a common set of rules. That is where NERC's reliability rules come in.

Congressional Action to Authorize Mandatory and Enforceable Reliability Rules Is Overdue

Beginning in the late 1990s, NERC and leaders both inside and outside the electricity industry realized that the way reliability had been handled for the previous three decades would no longer suffice. The voluntary system of cooperation and peer pressure that had worked well for 30 years would not be sufficient to maintain the reliability of the system, given the changes that were taking place. The answer was to make the reliability rules mandatory and enforceable.

For the past six years, NERC and a broad coalition of electricity industry stakeholders from all industry sectors, as well as customers and regulators, have been

seeking amendments to the Federal Power Act that would make the reliability rules mandatory and enforceable. That legislation would apply the reliability rules to all owners, operators, and users of the bulk electric system, regardless of those entities' jurisdictional status under other parts of the Federal Power Act. It would authorize creation of an industry-based electric reliability organization to set and enforce reliability standards, subject to oversight in the United States by FERC. The legislation also recognizes the international nature of the interconnected grid and envisions having reliability activities carried out by regional entities under delegation agreements from the ERO, again with FERC oversight.

Congress now appears poised to finally enact the reliability legislation we have been seeking, as part of the comprehensive energy bill. The House passed H.R. 6, its version of the comprehensive energy bill, in April. In late May, the Senate Energy and Natural Resources Committee reported out its version of the bill. With prompt Senate action, the two versions of the bill can move to conference. The U.S.-Canada Power System Outage Task Force investigating the August 2003 outage concluded that the "single most important step" for maintaining a high level of reliability is for Congress to enact the reliability provisions from the pending legislation. NERC is very hopeful that this year will be the year. We are convinced that if we had had the legislation three years ago, the blackout would not have occurred.

When the comprehensive bill gets to conference, we will be working with members of the conference committee and staff to resolve any remaining issues in the reliability language. Pursuant to a mechanism approved by FERC, the ERO and regional entities will collect funds from users of the bulk power system to support their reliability operations. In an effort to reduce the Congressional Budget Office "score" for the energy bill, however, the House reliability language contains a cap on spending by the electric reliability organization and its regional entities. That cap would limit annual spending by the electric reliability organization and its regional entities to less than what NERC and the regional reliability councils now spend, before we've implemented some of the programs required by the pending legislation. The bottom line is that without an adequate budget, the electric reliability organization cannot be successful, and reliability will inevitably suffer. The Senate Energy Committee has not included any such funding limitations in its energy bill.

We hope to work with the conference committee to eliminate the House reliability funding cap.

NERC Has Not Waited on Congress to Bolster the Reliability of the Bulk Electric System

As soon as the legislation is adopted and FERC completes its implementing rulemaking, NERC will apply to be designated as the electric reliability organization under the new legislation. But NERC has not waited for legislation.

In March 2001, NERC restructured from a stakeholder board of trustees to the independent board of directors that is specified in the legislation. In 2003, NERC initiated a new standards development process that is fair, open, balanced, and inclusive — we believe this also meets the requirements found in the pending legislation. NERC's standards process has been accredited by the American National Standards Institute. NERC used that new standards process to restate all of its existing standards, so that both the requirements and the accountability are clear and measurable. The new standards received overwhelming support from industry stakeholders and took effect on April 1, 2005.

With respect to compliance with its standards, NERC and the regional reliability councils began in 1999 to develop the processes and procedures necessary for administering a compliance and enforcement program, including the use of simulated penalties. Until the legislation is passed, NERC has no authority to impose actual penalties. Each year, NERC and the regional councils develop and post a report on the prior year's compliance activities.

Following the August 2003 blackout, NERC was an integral part of the joint fact-finding investigation into the blackout conducted by the U.S.-Canada Power System Outage Task Force. We fully supported the task force's findings and conclusions set forth in its interim and final reports. NERC also prepared its own detailed technical report and recommendations, which closely tracked the government's findings and recommendations.

It was and remains a great concern to me that NERC reliability standards were violated in August 2003, and that these violations contributed directly to the blackout. I am also very concerned that some of the same problems identified in studies of prior large-scale

blackouts also contributed to the August 2003 blackout. I stated then and I'll say it again: we must do better than this.

In October 2003, NERC requested all control areas and reliability coordinators to examine their systems for problems similar to those emerging as possible contributors to the August 2003 blackout, and to certify they had completed that review by December 2003. In February 2004, NERC directed those entities directly involved in the blackout to take remedial actions to correct a long list of deficiencies that had been identified by the joint NERC-Power System Outage Task Force investigation and to certify completion of the corrections by June 30, 2004. NERC followed up with audits to verify that the corrective actions had been completed.

NERC also initiated a program of readiness audits to assess the capability of all control areas and reliability coordinators throughout North America to carry out their responsibilities under the reliability rules. This readiness audit program is, I believe, the single most important step that NERC can take to guard against a recurrence of a major blackout. The program does not focus on past compliance with the rules; rather, the program is forward-looking, assessing each entity to see whether it has in place the processes and procedures as well as the trained personnel and tools needed to carry out its responsibilities for the reliable planning and operation of its portion of the bulk electric system. The program identifies examples of excellence (so that others in the industry may benefit from how an entity deals with a particular issue) as well as identifying areas for improvement.

To date, NERC has completed more than 50 readiness audits, and the final reports from those audits are posted on NERC's website. During the course of those audits, NERC identified ten examples of excellence, and those are also posted on the NERC website. NERC issued its first report to the industry describing those examples of excellence in March 2005. NERC expects to publish additional reports on examples of excellence on a quarterly basis.

NERC continues to strengthen its compliance program. As part of this effort, we have committed to ensure that greater visibility is given to those who violate NERC reliability standards. NERC now posts quarterly reports of compliance violations, including the identities of the organizations involved, once the violations have been confirmed.

NERC has a number of other strategic and technical initiatives under way to address problems identified in the blackout investigation. NERC is developing new reliability standards for vegetation management, determining facility ratings and operating limits, system personnel training, system frequency response, and nuclear offsite supply reliability. NERC has technical studies under way to develop an improved operator-training program, to examine issues related to voltage support and reactive power, to investigate improved operator tools for visualizing the operating status of the grid, and to improve system protection. The results of these efforts and others will be implemented over the next few years.

Despite the absence of the reliability legislation we have been seeking, NERC has made a concerted effort to use all available means to obtain full compliance with our reliability standards. We have worked closely with the Federal Energy Regulatory Commission and other applicable regulatory authorities in North America to ensure that the public interest is met with respect to compliance with NERC and regional reliability standards. NERC recognizes that we must do everything within our power to regain the public's trust and provide reassurance that preserving the reliability of the bulk electric system is of paramount importance to NERC and to the entire electricity industry.

Conclusion

I will conclude my testimony where I began, with an urgent request that Congress enact the reliability legislation this year. Following the blackout we were able to accomplish much because everyone was focused on reliability. However, as time has passed since the August 14 blackout, priorities have shifted, people have moved on; other issues are competing for attention. Having the reliability legislation in place will make sure that NERC and the entire electricity industry can maintain the proper focus on reliability on an ongoing, sustainable basis.

Thank you.